

REMARKS

Claims 1-4 and 6-18 are now pending in this application, with claims 1 and 4 being the only independent claims. Claim 5 has been canceled. Claims 1, 4 and 6 have been amended. Dependent claims 17 and 18 have been added. Support for this amendment may be found, for example, in the single figure. No new matter has been added. Reconsideration of the application in view of the above amendments and the following remarks is requested.

Rejection of Claims under 35 U.S.C. §§112, 2nd Paragraph

Claims 2, 6 and 9 stand rejected under 35 U.S.C. §112, second paragraph, as indefinite for failure to particularly point out and claim the subject matter which applicant regards as the invention.

The Examiner has stated “[t]he phrase ‘lapped on the side located opposite the G-rotor’ is unclear, confusing and indefinite. It is not understood which side represents the opposite of the G-rotor (in regards to claims 2 and 9). Yet, it is not understood which side of the cover and the bottom faces the G-rotor (in regard to claim 6). In addition, it is not understood whether the term ‘lapped on’, in this instance, refers to facing, overlapping, coinciding, or any other meaning”.

With respect dependent claims 2, 6 and 9 the claim wording is directed to the concept associated with the treatment of a specific or special side of the cover or the bottom. In particular, these sides are preformed such that they constitute the side that is located towards or opposite to the G-Rotor. For, example, as shown in the figure, the bottom 5 has a side that is disposed toward the electric rotor 4 and has a side that is disposed towards the G-rotor 9. Dependent claims 2, 6 and 9 are amended to clarify that they sides recited therein are sides of the cover and the bottom that face towards the G-Rotor. Such features become readily apparent with

reference to pg. 2, lines 13-19 of the specification as originally filed. That is, the specification expressly describes a high surface quality that is required for reliable operation of the G-Rotor pump is achieved by lapping “the bottom and/or cover ... on their side located opposite the G-rotor”.

Moreover, the phrase “lapped on” is a direct translation of the German word “geläpft”, which may be found at paragraph [0007] of the priority document DE 103 27 321.2 and pg. 2, line 18 of PCT/EP2004/050895. This phrase “lapped on” refers to a manufacturing process which leads to a particularly high quality surface. Page 3, second paragraph, of the English translation of the application as filed, clearly states that the cover 7 and bottom 5 are lapped on to produce high surface quality. Thus, based on the word “lapped” and applicants disclosure, the skilled person would readily appreciate that “lapped on” relates to producing a high quality surface on an inner surface of the pump.

In view of the foregoing, dependent claims 2, 6 and 9 are clear and withdrawal of this rejection is in order.

Rejection of Claims under 35 U.S.C. §§102 and 103

Claims 1, 2, 4-9, 11 and 13-16 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent Pub. No. 2002/0032042 (“*Schelhas*”). In addition, claims 3, 10 and 12 stand rejected under 35 U.S.C. §103(a) as obvious over *Schelhas*. For the following reasons, reconsideration and withdrawal of these rejections are respectfully requested.

Independent claim 1 has been amended to recite the limitation “wherein the bottom and the cover are manufactured entirely from plastic”. Independent claim 4 has been correspondingly amended. Support for this amendment may be found, for example, at page 3,

second paragraph, of the English translation of the application, and in the sole figure that uses a consistent cross-hatching to indicate the bottom 5 and cover 7 are formed entirely of the same material, i.e., plastic. In addition, the illustrated cross-hatching is consistent with the requirements of 37 CFR 1.84(n) that indicates graphic drawing symbols and other labeled representations may be used for conventional elements where appropriate (also see MPEP 608.02 IX. Drawing Symbols). Therefore, no new matter has been added.

The Examiner (at pg. 3 of the Office Action) states that:

Schelhas et al. teaching in figures 1, 3, and 4 a positive displacement fuel pump (flow pump 11) for a motor vehicle, comprising a G-rotor (impeller 12) arranged between a bottom (intermediate housing 21) and a cover (intake cap 16) and a spacer (see extended lip of the intermediate housing 21) arranged between the bottom and the cover, wherein the bottom or cover is manufactured from plastic.

Applicants disagree that *Schelhas* teaches now-amended independent claims 1 and 4 because *Schelhas* fails to teach or suggest a pump that has a bottom and a cover that are manufactured entirely from/of plastic, as recited in now amended independent claims 1 and 4.

Schelhas (col. 2, lines 36-39; FIGS. 1 and 2) explains that “[t]he intake cap 16 ... is embodied in two parts and has a wear-resistant insert 51 which is preferably of ceramic”. This insert 51 is received in a receptacle 52 of a plastic housing portion 53 of the intake cap 16”. *Schelhas* thus teaches a cap that is made from two pieces, i.e., a plastic housing portion and a wear resistant ceramic insert. However, applicants’ claimed cover is a single component that is manufactured entirely from/of plastic. There is no insert in the cover 7 shown in the sole figure of applicants’ disclosure. *Schelhas* therefore fails to teach applicants’ claimed cover for at least this initial reason.

Returning to the disclosure of *Schelhas*, col. 2, lines 55-56 of this patent teaches that “[t]he insert 51 forms the entire wall 18 and has a feed channel 41”. *Schelhas* (col. 2, lines 55-

56) additionally states that “[b]y the combination of materials of the plastic impeller 12 and at least one ceramic wall 18 or 19 adjoining it, a wear-resistant design of the flow pump 11 can be achieved”. *Schelhas* thus expressly describes that the pump shall have a ceramic wall 18 or 19, and that the insert 51 shall be manufactured from a wear-resist material, i.e., ceramic. Therefore, *Schelhas* teaches that the components 18 and 51 located opposite to the impeller are not manufactured entirely from plastic. Consequently, *Schelhas* clearly teaches away from the claimed invention that utilizes a bottom and a cover that are manufactured entirely from/of plastic.

Moreover, applicants disclose and claim a positive-displacement G-rotor pump. There is a distinct difference between the flow pump with an impeller as disclosed by *Schelhas* and the positive-displacement pump with the G-Rotor recited in amended independent claims 1 and 4. The flow pump of *Schelhas* includes an impeller with pump chambers 17. These chambers are limited by a ring of blades. Feed channels 41, 42 are arranged in the pump housing that is comprised of intake cap 16 and spacer 21. Due to the high rotational rate of the impeller, a circular flow in the pump chambers and the feed channel will be produced, by which fluid in the pump chambers will be moved. The impeller of such a pump, however, induces pressure and rotates at a rate that is entirely different than the flow rates and pressure induced by the driven G-rotor of applicants’ claimed positive-displacement pump.

In particular, a driven G-rotor is arranged in applicants’ claimed positive-displacement pump. When such a G-rotor is turned, fluid is pushed through the pump, in much the same as the operation of a gear pump, at lower pressures and rotational speeds. The skilled person would have no reason to consider the teaching of *Schelhas* when seeking to improve a positive-displacement pump, absent impermissible hindsight based on applicants’ disclosure. However,


even if *Schelhas* is considered, *Schelhas* teaches a pump where neither the bottom nor the cover of the pump is manufactured from/of plastic. Instead, the only plastic part disclosed by *Schelhas* is a housing portion 53 that is arranged at a distance from the impeller. This housing portion, however, is not a bottom or a cover of the pump, but rather a facing part of the pump. *Schelhas* thus fails to teach or suggest the positive-displacement G-rotor pump of now-amended independent claims 1 and 4. In view of the foregoing, amended independent claims 1 and 4 are patentable over *Schelhas*. Reconsideration and withdrawal of the rejections under 35 U.S.C. §102 and §103(a) are therefore in order, and a notice to that effect is respectfully requested.

In view of the patentability of independent claim 1 and 4, dependent claims 2, 3 and 6-16, as well as new dependent claims 17 and 18 are also patentable over the prior art for the reasons set forth above, as well as for the additional recitations contained therein.

Based on the foregoing amendments and remarks, this application is in condition for allowance. Early passage of this case to issue is respectfully requested.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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